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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant : Wei Chin Min et. al.  
Serial No. : 09/722,341  
Filed : November 28, 2000  
Title : SYSTEM AND METHOD FOR ASSISTING THE BUYING AND SELLING OF  
PROPERTY

Art Unit : 3625  
Examiner : Cuong H. Nguyen

**Mail Stop Appeal Brief - Patents**  
Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

APPEAL BRIEF

(i) *Real party in interest.*

ACCENTURE SDN. BHD., a corporation existing under the laws of Malaysia

(ii) *Related appeals and interferences.*

None

(iii) *Status of Claims.*

Claims 1-17 being appealed stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.

(iv) *Status of Amendments.*

The amendments filed on October 5, 2004 in response to the final office action have been entered.

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(v) *Summary of Claimed Subject Matter.*

The invention provides systems and methods for assisting the buying and selling of properties. The invention serves as a point of contact for sellers, buyers, negotiators and third party service providers in the real estate market, offering a forum for identifying needs, presenting solutions and accessing a suite of real estate tools and services.

In an embodiment, a system of the invention includes a technology solution having an application architecture and a technical architecture for supporting the application architecture; a business operation solution that uses the technology solution to assist the buying and selling of properties; and at least one third party relationship that assists the buying and selling of properties.

The application architecture preferably includes resource applications enabling users to access real estate information and tools; transaction applications enabling users to register, submit preference information, provide property information (regarding properties to sell or to buy), and apply for loans; appointment management applications enabling users to request, confirm and cancel appointments; advertising applications enabling market players to advertise real estate-related offerings to users; and operations applications for managing the operation of the system.

The technical architecture preferably includes hardware that supports the application architecture, such as web servers serving web pages that can be accessed by user computers connected to the web servers via the Internet. The web pages serve as an online interface between the application architecture and the users.

The business operation solution preferably includes independent but interacting product and content management functions for presenting news and information to users; customer service functions for addressing user inquiries and needs; negotiator acquisition and management functions for assigning negotiators and managing negotiators' involvement in transactions and appointments; operations support functions for accepting property-for-sale information and loan applications; marketing functions for obtaining feedback from users; alliance formation and management functions for forming third party alliances to address a wide range of user needs;

technology operations functions for tracking user activities and preferences; and back office support functions for human resource, financial and administrative management.

In another embodiment, a method of the invention includes providing an online interface that sellers can use to provide information regarding properties they wish to sell, that can be used to publish the property-for-sale information to many buyers, and that buyers can use to provide information regarding properties they wish to buy. That is, sellers can use the online interface to post properties for sale knowing that the information will be accessed by buyers who are ready to purchase a property. Similarly, buyers can use the online interface to search for a desired property. The method further includes selecting a property for recommendation to the buyer and providing the online interface for recommending the property to the buyer. That is, once the property-to-buy information is received, the method selects a property and recommends the property to the buyer through the online interface. The method further includes facilitating a negotiation between the seller and the buyer as necessary to effect a closing of a transaction between the seller and the buyer for the property.

Seller portfolios can be established to enhance the convenience of sellers who wish to monitor the status of their property. The portfolios may indicate how many buyers have asked for more information, how many times the property has been listed in search results and whether a buyer is interested in visiting the property. Preferably, the buyer is able to search for properties, maintain a list of favorite properties, and monitor the progress of any transactions in which he/she is engaged. If the buyer wishes to visit the property, he/she may schedule appointments online and visit the property offline. Preferably the method provides for the acquisition and management of negotiators who are assigned to assist in facilitating transactions between interested parties. The negotiators not only provide a human point of contact, but also provide assistance with appointments and closing activities. Negotiators portfolios can be established to show which properties the negotiator has been assigned and the status of commissions to be received by the negotiator.

Other services may be provided for the convenience of users, such as, for example, enabling the submission of pre-approved loan applications that are forwarded to a bank and tracked to report the status of the application to the user; enabling the searching for home

furnishings that are also recommended as desired; and enabling the availability and use of real estate transaction tools such as loan calculators.

Registered users may receive customer service that assists in training the user on the use of the online interface and directing the user to sources of information. Users have access to real estate-related content on the online interface, such as, for example, buying guides, personalized news, frequently-asked questions, and property reviews. Users may also be presented with advertisements on the online interface that offer products and services related to the real estate market.

In still another embodiment, profiles can be established for each user to enhance the user's experience by personalizing and customizing the online interface and the activities in which the user engages. The profile can be used to recommend properties, but also to recommend tools, information, and third party services that are relevant to the user. A preferred character profiling method of the invention includes defining a plurality of character types, defining a plurality of character attributes divided into character attribute subsets, defining a character profile matrix representing the likelihood that a person of at least one of the character types will fit into at least one of the character attribute subsets, assigning a character profile score to each user using the character profile matrix, and providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score.

During a registration process, and through each user's subsequent interaction with the online interface, demographic, neighborhood and property preference data can be obtained for each user. The mapping of each user in the character profile matrix preferably includes passing the demographic, neighborhood and property preference data through respective matrices to calculate weightages that indicate, for each of the preference data groups, the relative degree of similarity of the user to each of the predefined character types.

Recommendations can be made by passing the character profile scores through recommendation object profile matrices to calculate recommendation object profile scores that are ranked to determine the recommendation objects most relevant to the user. The recommendation object can be, for example, a property, a tool, a new project listing, an article, a pricing index, a promotion, a sorting preference, and/or a home furnishing. Finally, the method preferably provides for the tracking of each user's interaction with the online interface to not

only sharpen the character profile scores, but also to more accurately define the pre-defined character types. Examples of actions that are tracked

include property searches, profile searches, property price searches, changes to a list of favorite properties, requests to view detailed information regarding a property, requests for appointments to visit properties, and applications for loans.

*(vi) Grounds of Rejection to be reviewed on appeal.*

1. Whether claims 1-17 defining a new and useful process for profiling a user of a system for assisting the buying and selling of properties meets the statutory requirement of 35 U.S.C. §101.

*(vii) Argument.*

I. INDEPENDENT CLAIMS 1 AND 2 DEFINE A PATENTABLE INVENTION UNDER 35 U.S.C. §101 FOR A NEW AND USEFUL PROCESS OF PROFILING A USER OF A SYSTEM FOR ASSISTING THE BUYING AND SELLING OF PROPERTIES.

A. CLAIMS 1 AND 2 DEFINE A PATENTABLE INVENTION UNDER 35 U.S.C. §101 BECAUSE THEY FALL WITHIN THE "TECHNOLOGICAL ARTS" AND PRODUCE A "USEFUL, CONCRETE, TANGIBLE" RESULT.

35 U.S.C. §101 defines statutory subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto." There is nothing prohibiting a process claim from containing language that can be performed "with the aid of the human mind", or that requires a person to think to perform the method (see In re Musgrave, 431 F.2d 882, 893, 167 USPQ 280, 289-90 (CCPA 1970), see also USPTO presentation titled 35 U.S.C. §101 Training Materials slides 17-21).

However, for a claim to be statutory under 35 U.S.C. §101, the process must produce a "useful, concrete, tangible" result. (See State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d 1368, 1374-75, 47 USPQ 2d 1596, 1602 (Fed. Cir. 1998); see also USPTO presentation titled 35 U.S.C. §101 Training Materials slides 9-12). Claims 1-17 indeed produce a "useful, concrete, tangible" result and are therefore statutory under 35 U.S.C. §101. For

example, claim 1 includes "providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score." Both the customized recommendation and the customized opinion are useful, concrete, and tangible results.

The examiner appears to additionally base the rejection on a lack of "use of technology." However, In re Mahony, 421 F.2d 742, 745 (C.C.P.A. 1970) states "Appellant . . . intends the claims to cover the machine implementation of the process and not the mental implementation thereof. If the appealed claims accomplish that intent, . . . he will . . . have overcome the § 101 rejection, since the machine-implemented process is clearly statutory."; In re Musgrave, 431 F.2d 882, 893 (C.C.P.A. 1970) the court states that "all that is necessary, in our view, to make a sequence of operational steps a statutory 'process' within 35 U.S.C. §101 is that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of 'useful arts.'" The appellant's claims include multiple steps that are performed "using a computer." Since, according to the court's holding in Mahony, a machine-implemented process is statutory subject matter, the appellant's computer-implemented steps clearly satisfy the "use of technology" requirement cited by the examiner.

B. IN DETERMINING WHETHER A CLAIM IS DIRECTED TO STATUTORY SUBJECT MATTER, THE STATUTORY NATURE MUST BE DETERMINED BASED ON THE COMBINATION OF STEPS AND NOT BASED ON THE INDIVIDUAL STEPS.

The final action states:

"There is no use of technology in the above claims. While the independent claims have been amended (see claims 1,2) to include the phrase "computer-implemented" in the preamble, none of the claimed steps of these claims indicate that these are computer-implemented methods nor that a computer is performing the actions. In order to place the claims within statutory subject matter, it is suggested that the Appellant's amend the claims to more clearly define which steps are being performed by technology, such as computer processors, etc." (See final office action, page 6).

In response to the final action, in an effort to further prosecution, the appellant's amended independent claims 1 and 2 as suggested by the examiner to more particularly recite that the invention is a new and useful process that promotes the technological arts. In particular, the

method of claims 1 and 2 comprise: "generating, using a computer program," a character matrix and "assigning, using a computer program," a character profile score.

In response to the appellant's amendments, the examiner issued an advisory action which states:

"The request for reconsideration has been considered but does not place the application in condition for allowance because independent claims 1 & 2 still have limitations of "providing... recommendation and ... opinion to a buyer"; this claimed step could be done manually."

Based on the Examiner's comments, it appears that the Examiner rejects the claims because only a portion of the steps recite the use of a computer. This rejection, however, is not consistent with the court's holding in In Re Musgrave which states that claims including both mental and technology implemented steps satisfy the requirements of 35 U.S.C. §101. In In Re Musgrave, the court rejected the examiner and board's conclusion that the claims involved non-statutory processes merely because some or all the steps could also be carried out mentally, or it could be necessary for one performing the processes to think. In analyzing claims including both technology implemented steps and "mental" steps, the court found concluded that "the statutory language contains nothing whatsoever which would either include or exclude claims containing "mental steps" and whatever law there may be on the subject cannot be attributed to Congress. It is purely a question of case law". In re Musgrave, 431 F.2d 882, 890 (C.C.P.A., 1970). In discussing the board's determination that the claim was non-statutory the court further stated:

The board also considered individual steps in the claims to be "non-statutory," as in its conclusion about steps (2) and (3) of claim 2. While it may be a minor matter or a mere lapsus linquae, we are here concerned only with whether the combinations of steps constituting the claimed processes are statutory "processes."... We cannot agree with the board that these claims ... are directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think. All that is necessary, in our view, to make a sequence of operational steps a statutory "process" within 35 U.S.C. §101 is that it be in the technological arts so as to be in consonance with the

Constitutional purpose to promote the progress of "useful arts." Const.  
Art. 1, sec. 8.

As discussed above, the claim as a whole and not the individual steps must be considered when determining the statutory nature of the claim. Both claims 1 and 2 include multiple steps that are performed "using a computer program." Thus, the examiner failed to consider the claim as a whole and therefore erred in rejecting the claims because the "claimed step could be done manually."

II. DEPENDENT CLAIMS 3-17 DEFINE A PATENTABLE INVENTION UNDER 35 U.S.C. §101 FOR A NEW AND USEFUL PROCESS.

For at least the reasons discussed above, dependent claims 3-17 define patentable subject matter under 35 U.S.C. §101.

A. CLAIM 3

Appellant's claim 3 further limits claim 2 by providing examples of the character types and character attributes which are used by the computer program to generate the character profile matrix.

B. CLAIMS 4 AND 5

Appellant's claims 4 and 5 further limit claim 2 by including that the user is a seller and the customized recommendation is a recommendation to sell a property. Claims 4 and 5 further limit claim 2 by including that the user is a buyer and the customized recommendation is a recommendation to buy a property.

C. CLAIM 6

Appellant's claim 6 further limits claim 2 limiting the assignment of a character profile score to include receiving questionnaire answers from the user, mapping the user in the character profile matrix using the questionnaire answers, and calculating the character profile score. Claim 6 is implemented using a computer program and is patentable subject matter under 35 U.S.C §101.

D. CLAIM 7

Appellant's claim 7 further limits claim 2 by reciting that the questionnaire answers comprise demographic data, preferred neighborhood data, and preferred property type data.



E. CLAIM 8

Appellant's claim 7 further limits claim 2 by reciting additional steps implemented by the computer to generate a character profile matrix. The steps include passing the demographic data through a demographic matrix of the character profile matrix to calculate a demographic weightage indicating the relative degree of demographic similarity of the user to each of the character types, passing the preferred neighborhood data through a neighborhood matrix of the character profile matrix to calculate a neighborhood weightage indicating the relative degree of demographic similarity of the user to each of the character types, passing the preferred neighborhood data through a neighborhood matrix of the character profile matrix to calculate a neighborhood weightage indicating the relative degree of neighborhood preference similarity of the user to each of the character types, passing the preferred property type data through a property type matrix of the character profile matrix to calculate a property type weightage indicating the relative degree of property type preference similarity of the user to each of the character types, passing a relative weightage preference of the neighborhood weightage through the neighborhood weightage to determine a preferred neighborhood weightage for each character type, passing a relative weightage preference of the property type weightage through the property type weightage to determine a preferred property type weightage for each character type, and adding the preferred neighborhood weightage for each character type to the preferred property type weightage for each character type to determine a property weightage indicating the relative degree of property preference similarity of the user to each of the character types.

F. CLAIM 9

Appellant's claim 9 further limits claim 6. Appellant's claim 9 includes passing a relative weightage preference of the demographic weightage through the demographic weightage to determine a preferred demographic weightage for each character type, passing a relative weightage preference of the property weightage through the property weightage to determine a preferred property weightage for each character type, and adding the preferred demographic weightage for each character type to the preferred property weightage for each character type to determine the character profile score.

G. CLAIM 10

Appellant's claim 9 further limits the providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score of claim 2 to include defining a plurality of recommendation object attributes divided into recommendation object attribute subsets, defining a recommendation object profile matrix representing the likelihood that a person of at least one of the character types will fit into at least one of the recommendation object attribute subsets, assigning a recommendation object profile score to the user using the recommendation object profile matrix and the character profile score; and providing the customized recommendation to the user based on the recommendation object profile score.

#### H. CLAIM 11

Appellant's claim 11 further limits claim 10. Appellant's claim 11 specifies that the recommendation object is at least one of a property, a tool, a new project listing, an article, a pricing index, a promotion, a sorting preference, and a home furnishing; and when the recommendation object is a property, the recommendation object attributes are property attributes that include at least one of neighborhood, property type, buildup area and number of rooms.

#### I. CLAIM 12

Appellant's claim 12 further limits claim 10. Appellant's claim 12 specifies that assigning the recommendation object profile score comprises mapping the user in the recommendation object profile matrix using the character profile score and calculating the recommendation object profile score.

#### J. CLAIM 13

Appellant's claim 13 further limits claim 12. Appellant's claim 13 includes the limitation that mapping the user in the recommendation object profile matrix comprises passing the character profile score through the recommendation object profile matrix to calculate recommendation object attribute fit scores indicating, for each character type, the likelihood that the user would desire each of the recommendation object attributes. Claim 13 also includes the limitation that calculating the recommendation object profile score comprises adding the recommendation object attribute fit scores for each property attribute to calculate

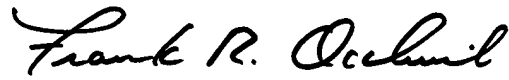
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Serial No. : 09/722,341  
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Page : 12 of 17

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Respectfully submitted,  
FISH & RICHARDSON P.C.

Date: February 16, 2005



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recommendation object attribute fit total scores; and adding the recommendation object attribute fit total scores to calculate the recommendation object profile score.

K. CLAIM 14

Appellant's claim 14 further limits claim 13. Appellant's claim 14 includes ranking the recommendation object profile score with the other recommendation object profile scores, selecting a number of high-ranking recommendation object profile scores and recommending to the user a recommendation object associated with a high-ranking recommendation object profile score.

L. CLAIM 15

Appellant's claim 15 further limits claim 2. Appellant's claim 15 includes tracking at least one online action of the user to obtain user habit information and recalculating the character profile score using the character profile matrix and the user habit information.

M. CLAIM 16

Appellant's claim 16 further limits claim 15. Appellant's claim 16 specifies that the online action is at least one of a property search, a profile search, a property price search, a change to a list of favorite properties, a request to view detailed information regarding the property, a request for an appointment to visit the property, and applying for a loan.

N. CLAIM 17

Appellant's claim 17 further limits claim 15. Appellant's claim 17 includes redefining the character profile matrix using the user habit information.

CONCLUSION

In view of the forgoing authorities and remarks, the decision of the Examiner finally rejecting claim 1-17 should be reversed. If the Board is of the opinion that a claim may be allowed in an amended form the Board is respectfully requested to include an explicit statement to that effect and direct that appellant shall have the right to amend in conformity with such statement which shall be binding on the Examiner in the absence of new references or grounds of rejection.

(vii). *Claims Appendix*

1. (Previously Presented) A method of profiling a user of a system for assisting the buying and selling of properties, comprising:

receiving data associated with a plurality of character types;

receiving data associated with a plurality of character attributes and divided into character attribute subsets;

generating, using a computer program, a character matrix representing the likelihood that a person of at least one of the character types will fit into at least one of the character attribute subsets;

assigning, using a computer program, a character profile score to the user using the character profile matrix, the user being a seller or a buyer; and

providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score.

2. (Previously Presented) A method of profiling a user of a system for assisting the buying and selling of properties, comprising:

generating, using a computer program, a character profile matrix representing the likelihood that a person of at least one character type will fit into at least one character attribute subset;

assigning, using a computer program, a character profile score to the user using the character profile matrix; and

providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score.

3. (Original) The method of claim 2, wherein:

the character types include at least one of yuppie, expatriate, young family, established family, teenager, elderly, and none; and

the character attributes include at least one of age, income range, marital status, number of children, and nationality.

4. (Original) The method of claim 2, wherein the user is a seller and the customized recommendation is a recommendation to sell a property.

5. (Original) The method of claim 2, wherein the user is a buyer and the customized recommendation is a recommendation to buy a property.

6. (Previously Presented) The method of claim 2, wherein assigning the character profile score comprises:

- receiving questionnaire answers from the user;
- mapping the user in the character profile matrix using the questionnaire answers; and
- calculating the character profile score.

7. (Original) The method of claim 2, wherein the questionnaire answers comprise demographic data, preferred neighborhood data and preferred property type data.

8. (Original) The method of claim 2, wherein mapping the user in the character profile matrix comprises:

- passing the demographic data through a demographic matrix of the character profile matrix to calculate a demographic weightage indicating the relative degree of demographic similarity of the user to each of the character types;

- passing the preferred neighborhood data through a neighborhood matrix of the character profile matrix to calculate a neighborhood weightage indicating the relative degree of demographic similarity of the user to each of the character types;

- passing the preferred neighborhood data through a neighborhood matrix of the character profile matrix to calculate a neighborhood weightage indicating the relative degree of neighborhood preference similarity of the user to each of the character types;

- passing the preferred property type data through a property type matrix of the character profile matrix to calculate a property type weightage indicating the relative degree of property type preference similarity of the user to each of the character types;

passing a relative weightage preference of the neighborhood weightage through the neighborhood weightage to determine a preferred neighborhood weightage for each character type;

passing a relative weightage preference of the property type weightage through the property type weightage to determine a preferred property type weightage for each character type; and

adding the preferred neighborhood weightage for each character type to the preferred property type weightage for each character type to determine a property weightage indicating the relative degree of property preference similarity of the user to each of the character types.

9. (Original) The method of claim 2, wherein calculating the character profile score comprises:

passing a relative weightage preference of the demographic weightage through the demographic weightage to determine a preferred demographic weightage for each character type;

passing a relative weightage preference of the property weightage through the property weightage to determine a preferred property weightage for each character type; and

adding the preferred demographic weightage for each character type to the preferred property weightage for each character type to determine the character profile score.

10. (Original) The method of claim 2, wherein providing at least one of a customized recommendation and a customized opinion to the user based on the character profile score comprises:

defining a plurality of recommendation object attributes divided into recommendation object attribute subsets;

defining a recommendation object profile matrix representing the likelihood that a person of at least one of the character types will fit into at least one of the recommendation object attribute subsets;

assigning a recommendation object profile score to the user using the recommendation object profile matrix and the character profile score; and

providing the customized recommendation to the user based on the recommendation object profile score.

11. (Original) The method of claim 10, wherein:

the recommendation object is at least one of a property, a tool, a new project listing, an article, a pricing index, a promotion, a sorting preference, and a home furnishing; and

when the recommendation object is a property, the recommendation object attributes are property attributes that include at least one of neighborhood, property type, buildup area and number of rooms.

12. (Original) The method of claim 10, wherein assigning the recommendation object profile score comprises:

mapping the user in the recommendation object profile matrix using the character profile score; and

calculating the recommendation object profile score.

13. (Original) The method of claim 12, wherein:

mapping the user in the recommendation object profile matrix comprises passing the character profile score through the recommendation object profile matrix to calculate recommendation object attribute fit scores indicating, for each character type, the likelihood that the user would desire each of the recommendation object attributes; and

calculating the recommendation object profile score comprises:

adding the recommendation object attribute fit scores for each property attribute to calculate recommendation object attribute fit total scores; and

adding the recommendation object attribute fit total scores to calculate the recommendation object profile score.

14. (Previously Presented) The method of claim 13, wherein providing the customized recommendation comprises:



ranking the recommendation object profile score with the other recommendation object profile scores;

selecting a number of high-ranking recommendation object profile scores; and  
recommending to the user a recommendation object associated with a high-ranking recommendation object profile score.

15. (Original) The method of claim 2, further comprising:  
tracking at least one online action of the user to obtain user habit information; and  
recalculating the character profile score using the character profile matrix and the user habit information.

16. (Original) The method of claim 15, wherein the online action is at least one of a property search, a profile search, a property price search, a change to a list of favorite properties, a request to view detailed information regarding the property, a request for an appointment to visit the property, and applying for a loan.

17. (Original) The method of claim 15, further comprising redefining the character profile matrix using the user habit information.